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Logoplaste – What are the Opportunities in the European Dairy Industry?

Booklet I of II

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Abstract

This paper studies the internationalization process of Logoplaste in the Rigid Plastic Container Industry, within the Dairy Products Industry. The conception of the implementation strategy required the study of the potential markets and its successful Business Model, derived from its internationalization experience. From all the European countries, Poland met the required conditions and was selected as the one with highest potential. Within Poland, the existent opportunities and the most efficient strategies to follow were addressed, with the entrance in the Yogurts Market being the main recommended tactical decision, as well as the continuity of Logoplaste best practices.

Keywords: Logoplaste, Rigid Plastic Package Industry, Dairy Products, Poland

1- Executive Summary

Logoplaste, a Portuguese multinational company, operates in the rigid plastic packaging industry. Present in 18 countries, it is still trying to grow into new geographies. Logoplaste uses a unique Business Model, targeting Blue Chip Companies and with one factory per client, it is able to deliver just-in-time and customized solutions. This model creates savings in transportation, handling and inventory costs, allowing a hybrid competitive advantage based on cost leadership and differentiation. Its positioning is to have competitive prices, high quality standards and innovative solutions which are Critical Success Factors in the industry.

This research aims to discover a new target market within Europe and in the Dairy Industry, which represents 41% of its revenues. After analysing Market Potential, Consumption Trends, Economic Freedom, and Competition, Poland appeared to have the strongest potential. That arises not only from the Polish market itself but also from the surrounding markets that have strong trade relationships of Dairy Products. Then, a careful analysis of the established players was needed, to check their potential versus

the investment required to create a strong partnership. As a result, Logoplaste should try to first target companies in the Yogurt Market, namely Danone, Zott Polska, Bakoma, SM Mlekpól and Bacha, which represent 67.78% of the market. Hereafter Logoplaste ought to try to enter in the Drinking Milk category, making use of their already established brand in the market.

2- Literature Review

This review aims to create the required understanding about the Dairy Products and Rigid Plastic Packages industries. The number of studies on Dairy Products is huge, due to its daily basis utilization. In many countries livestock is seen as an important source of income and a wealth differentiator (FAO et al. 2009)ⁱ. This differentiation is mostly used in underdeveloped countries. However, although analysed and regulated by competent entities, the Dairy Industry is not the centre of economic activities in Europe: agricultural activities account for 1.7% of European GDPⁱⁱ.

In what concerns Dairy industry, it is possible to verify the positive relationship between annual GDP per capita and Dairy Products consumption (P.W. Gerbens-Leenes et al. 2010)ⁱⁱⁱ but this relationship is not constant: an increase of 1% in GDP has different impacts in dairy consumption depending on the country's economic development. The elasticity of demand however is positive (FAO et al. 2012).

Besides the economic level other factors influence dairy consumption. Education plays an important role, contributing to a healthier society with more information on nutrition and healthy life-styles. The role of marketing, the gastronomy of each specific country, the culture and the spread of illnesses like allergic reactions and lactose intolerance can also shape the consumption habits and standards (Péter András Popovics et al. 2008)^{iv}.

According to FAO et al. (2009)^v per capita dairy consumption is higher in developed countries, which matches with P.W. Gerbens-Leenes theory. It also shows that the

existing gap is becoming smaller with recent development trends. To analyse the Dairy Products market it is important to divide it in different categories, Euromonitor^{vi} proposes five main categories: Liquid White Milk, Yogurt and Sour Milk Drinks, Cheese, Flavoured Milk Drinks, Powder Milk and Other Dairy. This differentiation is important since it allows the analysis of specific opportunities inside each category.

Rigid Plastic Industry has high potential according to analysts, Global Plastic Packaging Market is expected to grow from 670 billion dollars up to 829 billion dollars in 2016 (Pira International et al. 2012)^{vii}. Similar to the Dairy Industry, Packaging Industry has the following categories, according to the type of material: Glass, Board, Flexible Plastic, Rigid Plastic, Metal, and Other residual types of material. From those, Plastic Packages are the ones experimenting the highest overall growth rates (Pira International)^{vii}. Each type of material competes against the others. Some firms prefer to compete in more than one type of material (e.g. Amcor, Alpla-Werke) while others (e.g. Tetra-Pak, Logoplaste, GPC) are specialized in a single type. There are also companies who focus on a specific geography or type of package (e.g. packages for the Food & Drink category). This sector recorded several technological discoveries, thus allowing having lighter packages which are eco-friendly and cheaper. According to Pira International^{vii}, there are three major drivers of growth in this market: the high demand for lightweight and sustainable packaging solutions; the existence of healthier lifestyles worldwide; and the fast development of emerging economies that have higher demand for the consumption of plastic packages.

Market demand has driven companies to heavily invest on Laboratory Centres. Leitão^{viii} and Morgado^{ix} both stressed out this importance and particular application in Logoplaste's Business Model. According to them Logoplaste needs to focus his growth on Blue Chip Companies. Those companies allow enough liquidity to face economic

downturns, while representing a strong and reliable image to overall society (Paul Brockman and Dennis Y. Chung et al., 2003)^x

3- Historical background and description of the company

Discovered in 1907 by Dr. Baekeland, the synthetic mouldable plastic¹ soon revolutionized the world. Technological developments lead to a drop in prices, allowing its use in the container industry, replacing in part metal, paper and glass containers.

In 1976, Marcel de Botton, father of the actual CEO, Filipe Botton, founded Logoplaste. Specialized on rigid plastic packaging, soon Logoplaste was perceived as an innovator, introducing concepts such as in-house manufacturing and the Hole-in-the-Wall. Against current industry practices, Logoplaste started producing inside clients' facilities or in adjacent factories, instead of in a central production centre. The proximity enabled the reduction, firstly of transportation costs and secondly on inventory costs as the containers are delivered just-in-time to the client's production line. Each new client represents an investment between €5M and €20M. Therefore it is required to create long term relationships².

The huge success in Portugal left no other option than to go abroad³. In 1992, Logoplaste entered in Spain, producing water bottles to a Spanish mineral water start-up. This case represents, still today, the unique unsuccessful choice of Logoplaste, since the partner company failed on its financial obligations. Logoplaste had then to consider other geographies, and reconsider the way to choose partners. Logoplaste focus on Blue Chip Companies, companies with a national reputation for quality, reliability and ability to operate in good and bad times. In 1996, with the purchase of a near bankrupt

¹ PET–Polyethylene Terephthalate; HDPE–High Density Polyethylene; LDPE–Low Density Polyethylene.

² At least 5 to 10 years depending on the dimension of the client.

³ Most of the Blue Chip Companies operating in Portugal were already Logoplaste's clients, so the market was saturated; Logoplaste had revenues of €20 M.

Danone's supplier, it entered Brazil. The tremendous success achieved conducted the company to the number one position in this market.

After they proved to have success reproducing their methods in another country, they gradually expanded. Nowadays they are present in 18 countries, managing more than 2200 people, 60 factories and 350 machines in 4 continents⁴. The international spirit is imbedded in Logoplaste's culture. Thus there are reasons to believe that Logoplaste would be able to replicate the same model in other countries.

Throughout the years Logoplaste shifted its strategy to compete in an aggressive market. From an initial strategy focused on the low price/quality ratio, the company moved to a strategy where the contract negotiation is also done based on other components, specially the relationship between the two parts. As result of that Logoplaste created the ILab, a development centre with engineers working full time to create innovative solutions. This centre's success was so huge that in 2001 Logoplaste decided to transform it into an independent business unit. Currently ILab collects half of their revenues from its own clients.

Products & Services - HDPE is the principal type of plastic used in the Dairy Industry due to its specifications. It is resistant to high temperatures and opaque, which reduces microbial activity while protecting from the light exposure. The products are produced in a pull-based strategy. Clients know Logoplaste's production capacity and allocate the percentage of production in accordance with their needs. This way it is possible to face peaks in demand in a more effective and efficient way, without incurring in unnecessary inventory costs. This Supply Chain Management is close to the principles followed by Wal-Mart^{xi} in its relationship with suppliers. The integration developed allowed just-in-time deliveries, reducing response time and allowing better predictions of demand, thus

⁴ See Figure 1 – Logoplaste Footprint in the World, from Booklet II.

eliminating the bullwhip effect along the value chain. This is possible due to the Hole-in-the-Wall concept, a key element in Logoplaste's Business Model. The introduction of the concept allowed the creation of strong partnerships with clients. As result Logoplaste has often a sit in their clients' board, to define the objectives and plans for future production. Logoplaste is more than a simple supplier. They contribute to clients' product design, development, technical moulding and production process support/management and even training. Their know-how is applied in a daily basis, quality rules are set together and advices are given on technical specs. The Just-in-Time production system lead to an optimization of production and operations of the client, translated into lower transportation and inventory costs, because transport of empty bottles is costly.

Logoplaste offers additional services. The ILab works constantly to discover new techniques and technologies. ILab impact goes from the early conception of the product, to the design, prototyping, test and implementation. The benefits provided by this unit can be expressed in terms of cost reductions, from lighter packages consuming less raw materials, and efficiency gains.

Business Opportunity - The pursuit of a new geography aims the achievement of three main points in Logoplaste's strategy: to enable sales expansion, to smooth the risk of fluctuations in revenues due to environmental changes and to enter in countries which are not yet mature. The Dairy market is not fully explored yet by Logoplaste. It is necessary to take advantage from unexplored and profitable geographies. Those in which Logoplaste is not yet present, and where current consumption trends lead to the belief that, in a near future, those markets could represent a relevant source of revenue. To conduct the research on what country to choose it is also important to consider

cultural factors in the Dairy Industry. In each country the habits of usage are different, even in countries with similar economic development.

Regarding the Polish market in particular, is it possible to verify its potential, as Dairy Industry represents \$6,316.9M and it is expected to grow 22.6% until 2015. Here the Milk Market represents 26% of the Dairy Market total value, and nearly 50% of the milk consumed is Pasteurized. To this it is possible to add the absence of tough competition. Competitors are betting more on the flexible plastic market. However any change on this pattern must be tracked and carefully addressed.

4- Mission and Vision

For a company used to pursue a path of continuous innovation and growth, the only consistent mission is: “To be the worldwide natural choice in the supply of Rigid Plastic Packages solutions”. To achieve this Logoplaste’s Vision is to: “Assure a 20% annual growth, until 2014, through expansion to new markets, with an increase in the number of clients and also taking advantage of current partners’ growth”.

5- Strategic Objectives

Table 1- Impact of Business Process in the Strategic Objectives.

	Strategic Objectives	Short Term:	Long Term:
		Achieve a 20% Annual growth rate on revenues; Open a new plant every year; Target new markets.	To be a Global Player; To focus on market leading companies; To innovate and invest in technology; To invest in the growth of their people.
Business Process			
Operations (Rigid Plastic Packages Production)		Increase in production leads to an increase in total revenues. Moreover new production capabilities could lead to entrance in new markets.	The capacity to produce any type of package enables production to Blue Chip Companies and accumulates more know-how in Human Capital.
Innovation and Customer Relationship Management (ILab)		New technologies are extremely important to convince more clients to choose Logoplaste, creating the possibility to enter in new markets due to gains in efficiency and efficacy.	Being a leader in research contributes to aim top players and to be a strong company with valuable people.
Logistics (Hole in the Wall)		A strong interaction and proximity between parts allows having better plans about production, thus increasing efficiency on production and possibility of selection to new markets.	The customization is becoming more requested, this type of proximity allows to faster exchanges of information and a faster adaptation.

To succeed in this industry there are Critical Success Factors, such as:

Table 2 – Critical Success Factors in Rigid Plastic Packages Industry.

Price	This is the main concern, independently of the type of container. The container itself is not core business for any of Logoplaste's partners. Therefore, reducing the price as much as possible is desirable. However, as the length of the relationship increases, this factor progressively loses its dominance in favour to other CSFs
Innovation Skills	This attribute allows companies to create alternative solutions. Those solutions can be translated into lighter packages, thus reducing costs, or into more ergonomic packages for the final consumer, which could result in more sales. Moreover, this skill assumes also a higher importance since currently products have smaller life cycles when compared with past decades, increasing the requirement for permanent innovation
Partnering Skills	A few number of Blue Chip Companies control high market shares. Thus it is crucial for success the ability to create a strong and durable relationship with their top management. This is also important in the development of new package's solutions since it allows the collection of more information
Operational Excellence	This compresses several dynamics and subjects, since price is extremely important in partners' selection, then only with excellence a company is able to fight this price pressure. Moreover as most of the partners are strong international companies, and consumer goods producers must fulfil several security laws, then they also rely on their suppliers to help them avoid any trouble with law, which can be extremely hurtful for their reputation. Thus quality standards and reliability need to be achieved and sustained over time regardless the location of the plant.
Culture	Specifically in the Dairy Industry, it is important to know population's preferences towards containers. A brief example could be found in Portugal where the population prefers to consume milk from Tetra-Pak containers.
Capacity to Quickly Expand Operations	This market has a predicted strong growth rate of 23.7% until 2016 ^{vii} . Thus all the players fight to find the right financial solutions to finance a continuous growth. Players with strong financial resources are able to spread their operations across the globe easily.

Table 3 - Critical Success Factors' Impact in Business Main Processes.

	Critical Success Factors	Price	Innovation Skills	Partnering Skills	Operational Excellence	Culture	Capacity to expand Operations	Total of Impacts
Business Process								
Operations (Rigid Plastic Packages Production)		Find the right Suppliers is key to reduce at maximum the cost per package	New Innovations allow to have a more efficient Production	Appellative packages are also a reason to be selected as Supplier	Only with efficiency and efficacy is possible to guarantee reliable packages	Different types of Culture request different types of package Solutions		5
Innovation		Discovery of	A strong	Reputable	Developme	Different		5

n and Customer Relations hip Management (ILab)		new technologies and techniques lead to savings in costs	and multicultural Laboratory is key to find new solutions sooner	laboratories can reach clients that otherwise would be unreachable	nt of new processes enable the company to be more efficient in production	cultures result in different production techniques		
Logistics (Hole in the Wall)		Allows reductions in Price due to decreased costs with transportation and inventories		The proximity created allows to have more proximity with clients	Enables the company to decrease costs of inventory and transport		The High investment associated with this model creates resistance to quick expansions	4

Value Chain



Figure 1 – Value Chain

Logoplaste pursues the leadership in each market they operate. So it is crucial to develop a value chain capable to integrate company's activities and potentiate the value delivered to the final customer. In an aggressive environment, companies compete fiercely on price. Therefore, Inbound Logistics, Operations and Outbound Logistics are key to enable the delivery of competitive prices. Those activities need to be present in all plants to implement the Business Model and fulfil the Value Proposition. Furthermore it is necessary to assure strong future relationships through Marketing and Sales, Customer Relationship Management (CRM) and Innovation. These three elements can be externalized to Logoplaste's Headquarters together with other

Secondary Activities, which are crucial to assure a sustainable development. As result of the proper functioning of all the components in the Value Chain, Logoplaste is able to provide a reliable product with an unquestionable quality at a competitive price, which is aligned with their Competitive Advantage.

In a new venture it is necessary to create through Secondary Activities (Firm Infrastructure, HRM and Financing) conditions to have a strong team, capable to further allow the proper functioning of Primary Activities. In order to discuss and evaluate the Business Opportunity an external analysis was conducted to access the opportunities and select the one with more potential.

Table 4 - PEST Analysis

Political: The geographical dispersion of Logoplaste's activities lead to a differentiated set of rules being applied, there are different accounting standards, different taxes and environmental laws. Thus it is imperial for Logoplaste to study carefully each market. Otherwise the profitability could be jeopardized. Depending on the economic level and political environment in each country the penetration in the market can be easier or difficult. Therefore it should be studied if favourable conditions for business will be sustained over time or not.

Economical: Logoplaste targets mostly Blue Chip Companies, therefore, although with some impact of economic fluctuations, the company resists to downturns, since most of the clients produce primary goods, such as milk.

Other points that could hurt Logoplaste are the exchange rates and interest rates. Changes in both factors could impact the expected return on investment. Moreover, in the interest rates case, Logoplaste's has a necessity for international credit. This situation results from the high interest rates requested by national institutions which contribute to the mitigation of business opportunities.

Additionally, oil prices can damage Logoplaste profit margins, since oil represent the biggest share of costs in the production of all the packages. Thus fluctuations in price could impact Logoplaste's results. However some of the contracts are protected from dramatic changes in the prices of raw materials (changes for both sides).

Social: With natural concerns about the environment, consumers are requesting more and more information about the source of consumed products to reduce their ecological footprint. This pressures producers to create new technologies, to introduce recyclable materials in their products and integrating fewer raw materials. Additionally, it is important that the culture of each country shapes the amount of sales. Depending on the country, on their consumption habits and lifestyles plastic could be more or less desirable. Regarding the Dairy Industry, consumers in general tend to use Tetra Pak, Plastic or Glass Containers.

Technological: In line with current Social concerns, it is becoming more demanding for innovations Labs to create something new. Across the years, new plastic solutions have been discovered, and there is still some space for new solutions. Thus it should be sustained a heavy investment on new solutions, which could decrease future costs while increasing efficiency, this way a new comparative advantage could arise from this investment.

Global Market and Target Market Selection - The Rigid Plastic Container Industry is composed mostly by bottles, boxes, caps, cosmetic cases, yogurt containers and drinking cups. The overall industry is expected to grow from 5 to 6% per year until 2013, which is higher than the 2% expected growth of the overall container and packaging industry. The market with more potential is Asia-Pacific. Western Europe and North America are the largest markets but with already mature markets⁵.

Table 5 – Milk Characterization per type.

Milk Type	Heat Treatment	Unopened Shelf Life
Pasteurized	72-75°, 15-40 seconds	4-7 days at <8°C
UHT	135-150°, 4-20 seconds	6 months at ambient temperature
Sterilised	110-120°C, 10-40 minutes	9 months at ambient temperature

The type of plastic used in the industry is HDPE, the only packaging material able to store the 3 types of milk. However for each type of package the plastic needs to have different densities to offer a higher protection in the Sterilised and UHT milk. For Pasteurized milk the cheapest package is made from rigid plastic, while for UHT milk Tetra Pak packages are cheaper due to the required density from plastic containers.

UHT milk consumption grew over the years, mostly in substitution of Sterilised milk, and represents the highest share of milk consumed in Europe, followed by the Pasteurized milk. The preference for each type of milk depends on the country. In countries like the UK more than half of milk consumed is pasteurized. In other cases such as Spain or Portugal this type of milk accounts for less than 10% of sales.

Market Selection - According to Michael H., President of BioPharma/CPG, there is a list of factors that should be analyzed during an internationalization process: firstly the market and profit potential, where GDP, unemployment rate, and competition are analyzed; secondly country's regulation and liabilities, to assure that all obligations are fulfilled. Afterwards there are others that impact the analysis in a smaller scale. Each new Logoplaste contract is tailored for each partner, so product redesign costs to meet

⁵ See Table 1 – Growth Rate in the Rigid Plastic Packages Industry, from Bocklet II

consumers' preferences are analyzed case by case. The same happens with Energy and Labour costs since the final price takes them into account.

To narrow down Logoplaste opportunities it is necessary to make a first selection of countries. The first segmentation should be to select only markets where Logoplaste is not present yet. The presence of current partners in a country might also be an important factor to consider as it can be an opportunity to intensify of current business relationships, in a new country⁶.

India is the World's biggest producer of milk, followed by the US and China. European countries however also have some prominent statistics. Russia ranks 5th, followed by Germany (7th), France (8th), UK (10th) and Italy, Turkey, Poland, Ukraine and the Netherlands immediately afterwards^{xii}. The preference for Pasteurized milk allows the elimination of several countries where the consumption of this milk is less than 50%⁷.

There are differences in Europe in terms of Economic Freedom^{xiii}. Ukraine, Belarus, Russia, Italy, Serbia, Montenegro and Greece have less freedom. In some cases this phenomenon is mostly explained by the recent crisis while in others is explained by the existent levels of corruption, which could jeopardize the creation of a long term relationship, essential to assure profitability, and put at risk the repatriation of profits. Therefore the referred countries should not be priority for expansion.

In Eastern Europe, as a result of the recent political events, the economies are becoming more receptive to foreign investment. Hence foreign companies increased their investments in those countries. The profit potential of an unexplored market could be enormous. However it still needs to be measured the risk emerging from property rights, bureaucracy and state's intervention on economy. Among Eastern Countries, Hungary, Czech Republic and Poland rank first in those rankings^{xiv}. All those factors, together

⁶ See Table 2 – Logoplaste's Current Partners in the Dairy Industry, from Booklet II

⁷ See Table 3 – UHT milk as a percentage of total consumption, from Booklet II

with growth perspectives for the coming years lead to the selection of Poland as a Top-investment priority for Logoplaste⁸.

Market Analysis - Polish dairy market accounted for 3.9% of the European dairy market value in 2010. In that year Polish market grew 4.6% up to \$6,316.9M and it is expected to grow 22.6% until 2015. This results from a strong performance in the cheese, yogurts and chilled desserts categories. Cheese is the most important product in the market (27.4% of the market) followed by drinking milk (26%), which represents \$1,700M and \$1,600M respectively. This market is highly fragmented; the top-3 companies represent solely 26.7% of the market, even if inside each category there is lower fragmentation. There are potential clients in different categories, namely in Butter and Dairy Drinks categories. In Butter category there are two main players: Mlekpól Dairy Co-operative and Mlekovita Dairy Co-operative. They are well established, produce more than one type of product (milk, cheese and yogurt) and export to different geographies. In the Dairy Drinks category (includes Yogurts and all kinds of Milk varieties), even with the presence of big companies as Yoplait, Nestlé and Danone, the market is dominated by Danone followed, among others by SM Mlekpól, SM Mlekovita, Bakoma and Zott Polska: a mix of Polish and foreign companies.

Drinking Milk - UHT Milk is slightly more consumed than Pasteurized Milk in Poland. The distance however is becoming smaller as more consumers perceive Pasteurized Milk as tastier and more nutritional. Their demand for healthier products, as soy beverages, increased. Drinking Milk category is expected to grow about 1% per year until 2016. Domestic companies dominate this market due to proximity to raw materials and their historical presence. International players however are seeking for opportunities to enter.

⁸ See Figure 2 – Narrow Down of Opportunities for Logoplaste, from Booklet II

Table 6 – Polish Drinking Milk Products’ Indicators.

	Market Share in Drinking Milk Products ^{vi}					Number of production Facilities	Sales Revenue M/Zloty ⁹
	2006	2007	2008	2009	2010		
SM Mlepol	23.34%	24.06%	25.31%	25.12%	25.26%	12	2,518
SM Mlekovita	11.86%	12.20%	13.78%	14.56%	15.37%	12	2,365
OSM Lowicz	8.93%	9.35%	10.13%	11.29%	11.50%	3	1,025
Jerónimo Martins	2.41%	2.44%	2.90%	3.00%	3.50%	Private Label	NA
Tesco Polska	1.91%	1.94%	2.30%	2.52%	2.70%	Private Label	NA
Others	51.55%	50.01%	45.58%	43.51%	41.67%	-	-

The concentration in the market is increasing as industrialization increases. Moreover due to the fragmentation in the industry, the importance of Private Labels is raising due to their distribution channels. It is also important to notice that the average price of milk is expected to grow as a consequence of the increase in energy and labour costs.

The number of Facilities is an important indicator for Logoplaste, since their Business Model states: “One Client’s Facility, one Logoplaste Facility”; a higher number of facilities would represent a higher initial investment to build a strong partnership.

Yogurts - In 2011, Yogurt and Sour milk drinks consumption increased by 6%, and it is expected to grow 3% per year until 2016. Within the category, there is an upward trend in the consumption of functional beverages as health concerns arise. A healthy life style pushes up the consumption of drinking yogurts, as it increases the consumption of on-the-go products.

Table 7 - Polish Yogurt and Sour Products’ Indicators

	Market Share in Yogurt and Sour Milk Products ^{xv}					Number of Production Facilities	Sales Revenues M/Zloty ⁹
	2006	2007	2008	2009	2010		
Danone	28.35%	29.2%	30.1%	31.07%	31.08%	2	1.792
Zott Polska	12.89%	13.51%	14.04%	14.69%	15.29%	1	0.878
Bakoma	13.63%	13.43%	13.71%	14.12%	14.22%	1	0.523
SM Mlepol	3.30%	3.35%	3.45%	3.61%	3.98%	12	2.518
Bacha (Lactalis)	4.31%	4.26%	3.70%	3.33%	3.21%	1	0.100

⁹ Values in Millions. Exchange Rate: 1 Euro =4.111 Zloty, (04/01/2013 by Exchange-Rates.org)

Others	37.52%	36.25%	35.00%	33.18%	32.22%	-	-
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Danone is by far the largest producer in Poland. The market is largely dominated by foreign companies, but there are still some national companies, which are open to be acquired by other companies. Compared to Drinking Milk industry, Yogurts' producers have fewer facilities. Thus the required investment to enter this sector is smaller.

Competition - Is an important factor to mention. Amcor and Alpla-Werke presence in Poland until now are confined to 5 facilities each, none of them allocated to the production of rigid plastic packages. GPC totalized €36,1M revenues in 2009 in Poland and is the strongest competitor in this market, since it is already established in the market and has strong reputation¹⁰. The analysis of the industry's Main Financial Data proves that although smaller than its competitors, Logoplaste can still have stronger results and a better allocation of resources, which proves that with enough financial access it could be able to achieve higher growth rates¹¹.

Competitive Assessment

Table 8 - Porter Analysis

Bargaining Power of Customers – High	Since Logoplaste supplies some of the most important companies in the world, it cannot say "NO" too many times. They represent a secure source of revenue, so it necessary to make some concessions to sustain them and to establish strong relationships. The most difficult thing is to conquer the client, once out then it is practically impossible to regain their trust. Still for some smaller companies Logoplaste is able to assure better agreements. Logoplaste bets on long term relationships due to the required initial investment with the construction of facilities next to the client, so deal failure represents a threat. Moreover, the relationship between Customers and Suppliers is also made of cooperation. Changes in the production must be negotiated between the two parts. In addition the appliance of new solutions (such as the shift from glass to plastic bottles) must be done together.
Bargaining Power of Suppliers – Medium/Low	Plastic pellets are supplied almost as a commodity by large petrochemical companies. They are priced by quality and quantity. Since they are a commodity the bargaining power is medium, because there could still exist fluctuations in oil's prices. Regarding machinery, they are tailor-made for companies in the industry; there are not many companies able to produce such machines. However, the bargaining power is quite low, as if they do not customize the machines according to the client's needs they might lose important clients.

¹⁰ See Table 4 – Competition in Poland, from Booklet II

¹¹ See Table 5 – Main Financial data about Logoplaste and its Competitors (2007), from Booklet II

	Finally, considering labour and energy costs, Logoplaste has no bargaining power, those costs are fixed by the market (or state) and the company is simply a price taker. Depending on those costs, Logoplaste can invest in more labour or technological-intensive factories.
Threat of Substitute Products – Medium	There is always the threat of substitution, e.g. it happened when companies shifted from glass to plastic containers to reduce costs. The reverse situation could happen with new discoveries as a response to increases in oil prices. In a deep analysis, we can find that each type of product has its own substitute product. E.g. Water could be purchased in a regular plastic bottle, but it can be also be bought in a glass container, or collected from a fountain or the tap. If a products gets dropped then it would be impossible to keep selling packages. In the case of Milk drinking Products the biggest threat is the possible change towards Tetra Pak packages. In Poland however there is the opposite trend. Regarding Yogurts and Sour Milk Products, with the increase of on-the-go products the trend is also to increase the number of rigid plastic packages sold.
Threat of New Entrants - Low	The entrance in this industry requires high amounts of capital, strong networks, and engineering knowledge. All the companies are well established in the market, so it is difficult for new entrants to offer the same reliability and technological solutions. Moreover bigger firms are also growing through mergers and acquisitions which make it tougher to create a scale big enough to survive.
Competitive Rivalry within the Industry - Medium	The major sources of revenues are in Faster Consumers Goods Companies, specially the most reputable world groups. Thus competition to establish a relation with a client is fierce. Companies usually compete on price, new package solutions and on gains of efficiency provided. To succeed it is necessary to present at the same time a competitive price and a guarantee of continuous improvement. Logoplaste did so by introducing the Hole-in-the-Wall concept and the creation of the ILab, with which it earned several innovation awards.

Table 9 - VRIO Analysis

Resource/Capability	V	R	I	O	Competitive Implication
Good CRM	V	X	V	V	Competitive Parity
Quality Standards	V	X	V	V	Competitive Parity
Value of the Brand	V	X	X	V	Competitive Parity
Innovation Capacity (ILab)	V	V	X	V	Temporary Advantage
Production Flexibility	V	V	V	V	Sustained Advantage
Inventory Costs	V	V	X	V	Temporary Advantage
Transportation Costs	V	V	X	V	Temporary Advantage
Network	V	X	V	V	Competitive Parity
Capacity to quickly expand operations	V	V	V	X	Competitive Disadvantage
Fulfillment of Safety Laws	V	X	X	V	Competitive Parity
Hybrid Competitive Advantage					
Differentiation Advantage			Cost Advantage		
One Client – One Factory; Hole-in-the-Wall Concept; Constant interaction with the Client to access their needs; Innovation Capacity.			Savings on: Transportation, Inventory, Space and Handling; Idle Capacity to face peaks in demand.		

6- Business Model

Customer Segments - Logoplaste targets Blue Chip Companies. This is crucial since Logoplaste must heavily invest in each facility. A poor choice of client may, during a crisis, lead to huge losses, as it happened with Logoplaste's first internationalization experience. Regarding the Polish market there is a group of companies that fits these conditions: SM Mlekpól, SM Mlekovita, Zott GmbH & Co. KG, Groupe Danone and Bakoma, among others. These companies account today for almost 30% of the Dairy Market in Poland. Considering the final user of the packages, Logoplaste does not make any segmentation because that choice is done by Logoplaste's clients (B2B). However it must also adjust to their preferences to provide a safe and ergonomic package.

Value Proposition - Primarily Logoplaste offers the possibility to cut costs, which increases the other part's profit margin. However the price is just the mean to enter in a client. As the relation evolves then Logoplaste offers other sources of value creation. The proximity and exclusivity offered allow more flexibility to adjust the production according to client's peaks in demand due to the Hole-in-the-Wall production concept. This allows a just-in-time approach, which together with a pull strategy enables other types of contributions, translated into lower transportation and inventory costs. It is crucial to create good relations, because that translates into a risk reduction; reliability proved over time decreases the perception of risk of the client.

Different customers have different types of package with different specifications. Thus the ILab listens to each client's needs. Then it tests and creates new solutions, to reduce costs or to create more ergonomic packages, always representing gains in efficiency. The discoveries are shared with Logoplaste's partners to give an image of cooperation and open book policies, where there is truth cooperation to create benefits for both sides, reason why Logoplaste is more than a simple supplier of rigid plastic containers.

Channels - To fulfil the value proposition it is necessary to construct one factory to serve each client through in-house production. Each new factory is constructed next to client's facility and represents a high investment which depends on the client's factory size. This approach is cost-efficient, because it allows savings in transportation and inventory costs, for the client. Additionally the Hole-in-the-Wall contributes to other future gains in the package conception and design. A secondary channel is the ILab. The ILab develops and provides new solutions, even for clients who are not supplied by the company. In a World where information is becoming easier to obtain it is important to have a strong innovation centre to keep tracking new possibilities for clients.

The initial contact with a partner starts, usually, with a commercial or a client manager offering a new solution. Then Logoplaste starts producing packages, and sales are driven by the constant interaction between Logoplaste's team in the factory and the partner's team. That interaction is key to enable renewal of contracts. Once again the ILab is crucial to develop solutions and facilitate this process before contracts expire.

Customer Relationships - Clients search for an open relationship in which quality, quantity and reliability are assured by a supplier, flexible enough to change the production rate to face peaks in demand. Logoplaste's staffs interact daily with operations managers from each factory. Thus they can carefully listen to them, see their problems, concerns and help to design solutions for those problems. This way it is possible to integrate the core business with ILab activities. The confirmation of a good CRM is in Logoplaste's 100% retention rate¹². Never a client left Logoplaste to be supplied by a competitor.

Revenue Streams - Logoplaste engages in dynamic pricing, thus the profit margin for each client depends heavily on its bargaining power, which is a result of its dimension,

¹² Interview with Dr. Pedro Alves, Logoplaste's Communications Assistant , 14/09/2012

the quantity required and the historic interaction with Logoplaste. The price is defined per bottle. However it usually predicts variations in price (up or down) in line with possible fluctuations on the price of key components. If the price of oil goes unexpectedly up, then the final price will reflect that. Quantities demanded below a certain level are also penalized, and those situations are contractually agreed to compensate the high initial investment levels.

Logoplaste is not extremely dependent on a single company. In Figure 2^{xvi} it is possible to see that only one client represents more than 10% of revenues, and it is not dependent from a single industry as seen in Figure 3^{xvi}. Moreover there are also revenues coming from the IILab services, which accounted for €5 M in 2011.

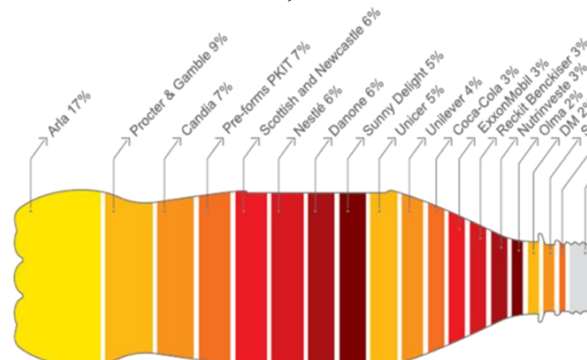


Figure 2 - Logoplaste's Revenue per Client

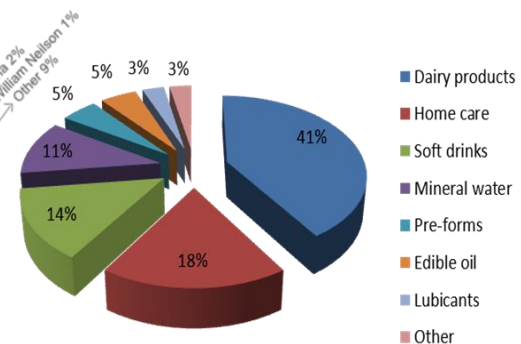


Figure 3 - Logoplaste's Revenue per Category

Key Resources - To create more value, it is necessary to contract top Human Resources, leaders capable to think outside the box. The request for top Human Resources creates the need for an international company. Logoplaste hires national Human Resources to each factory, but the teams in different countries interact regularly, deriving in a strong International Culture. This provides the know-how to create a successful strategy when entering a new geography. Work with Blue Chip Companies requires strong quality standards: suppliers must be reliable. Thus Logoplaste works under constant pressure to deliver high quality products. That takes to constant Production Optimization, leading to efficiency, cost savings and more reliable packages. Logoplaste works permanently with the client to assure this continuous process. To be

able to assure the competitive advantages it is crucial to create patents for the new pre-forms and software created by the ILab. Although there is a continuous pursuit for new technologies and new solutions, more cost-efficient and ergonomic, Logoplaste is in fact a Customer centred company. New technologic solutions are only useful if they add value to the value chain.

It is necessary to heavily invest to grow more. Therefore Logoplaste needs to collect international financial resources, due to lack of capacity from Portuguese financial institutions. This is expensive and tough for a relatively poorly known brand, when compared to other companies. To overcome this Logoplaste needs to provide them a better picture of the company and stress out all the potentialities they have. Another important factor is to assure that the right machinery is available at the right time for the client. This creates pressure to Logoplaste's suppliers to deliver everything on schedule.

Key Activities - To fulfil the value proposition the company must organize their different activities, to align them towards the same final goal. Logoplaste recruits in the country where factories are. Thus it is needs to develop good mechanisms to recruit and form human resources, so that they can assure the same outcome in all geographies.

ILab developments, Operations Excellence and the Hole-in-the-Wall are crucial to create a pleasant business atmosphere and shape the way Logoplaste is recognized.

Key Partners - To be at the top of the industry, Logoplaste pursuits good relationships with all the players in the industry map. Regarding Suppliers, it is crucial to develop strong durable relationships, particularly with machines' manufacturers, as each machine must be tailor-made to each situation. Those relations reduce largely the risk of breakdowns. One major focus of Logoplaste is the ILab, and all the resources involved on it. Particularly for larger companies, it is important to show that they are permanently working on their behalf, to provide other cost-efficient solutions in the

future. This type of company provides an important source of revenue, research resources and know-how about the market and consumers' preferences. This enables discovery of new solutions.

Cost Structure - Logoplaste's costs are composed by four main drivers: Labour, Energy, Machinery¹³ and Raw Materials. The Cost Structure changes by country, and depending on the Labour costs, Logoplaste's factories are more or less labour intensive.

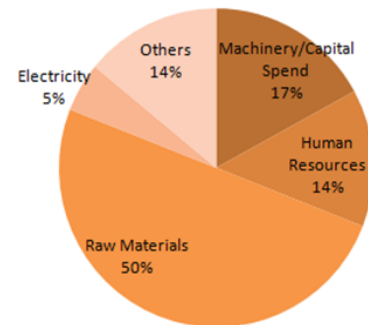


Figure 4 - Logoplaste's Typical Cost Structure

The analysis of Labour Price's Index shows that Eastern Countries have lower Labour costs. This is so notorious that, for instance, in Bulgaria the salary is more than ten times lower than in Sweden.^{xvii} Considering the Energy Prices Index, there is a lower difference among countries: on average a company in Europe pays €0.11/kWh and it is impossible to state differences in prices between developed countries and others on the periphery.^{xviii} The biggest factor influencing costs are Oil's price fluctuations. To be protected from this, Logoplaste created contractual mechanisms to transfer part of the risk to the client. Oil represents on average 50% of the costs, and has recently showed an upward trend in prices, which could increase the threat of substitute products. Machinery costs, account for nearly 17% of total costs, as an attempt to decrease those costs, Logoplaste relies on Suppliers to deliver a perfect product. Thus Logoplaste's Suppliers have strong reputation and history in the market¹⁴.

Logoplaste tries to optimize their cost structure using the ILab, and their clients cost structure. The permanent interaction between parts allows Logoplaste to openly advice the other part about possible benefits rising from changes in their production process.

7- Industry Mapping

Table 10 – Polish Industry Map.

¹³ Initial Investment and maintenance costs.

¹⁴ Otto Hofstetter AG, which is the world's second largest manufacturer of injection moulds

Position in the Supply Chain	Interaction with Logoplaste
Chemical Industry (Plastic Pellets) Machinery Suppliers/ Labour Market / Energy Suppliers	<p>Chemical Industry: has strong bargaining power over Logoplaste. They sell a commodity; prices are defined per ton depending on the quality of the product. Since it is a commodity the access to this in Poland is easy.</p> <p>Machinery Suppliers: Usually from small/medium dimensions, they create tailored machinery for each client. Thus they depend on Logoplaste (e.g.: Uniloy Milacron and Otto Hofstetter AG). Logoplaste needs to assure perfect conditions of the equipments, these come from international companies, with no significant impacts in Logoplaste's overall cost structure.</p> <p>Labour Market: It is as a monopoly. The market defines the price, and Logoplaste is responsible to provide training. In Poland, there is some lack of skilled workers, thus training actions should be reinforced.</p> <p>Energy Market: Depends also on the country but the price is a given. In Poland the energy prices are in line with other countries' prices.</p>
Logoplaste/Amcor/ PlastiPak/ Alpla-Werke/ Graham Packaging/ etc.	Logoplaste needs to take close attention to its competitors. Especially to any technology developments from their part, and the direction they are moving inside the Polish market.
Dairy Industry	The Industry demands an efficient supplier, capable to provide resistant, quality and practical bottles at competitive prices. They also value a flexible supplier capable to face peaks in demand, in which they can trust for future developments. Since in Poland there is not yet a strong market for these products it is important to take the first mover advantage.
Wholesalers and Retailers	There is little interaction between these two groups. However it is necessary for Logoplaste to keep attention to details such as the shelf space to avoid a war. In the Polish market Logoplaste could take advantage of Jerónimo Martins experience about the subject.
Consumers	Logoplaste is producing something that will be ultimately used by a consumer. So it is important to keep track of their needs and make adequate efforts to make their lives easier with the development of ergonomic bottles. Those practices are afterwards recognized by the industry and work as a reason why, to bet in a specific supplier.

8- SWOT/TOWS Analysis

For Logoplaste this will be the first contact with the Polish market. However there are already a set of Strengths and Opportunities arising from Logoplaste's previous experiences. At the same time there are some Weaknesses and Threats that should be addressed and analysed to prevent any failure when implementing an Entry Strategy.

Table 11 – TOWS Analysis

<p>Opportunities:</p> <p>Explore current partners expansion(specially the biggest ones such as Danone and Arla); UHT only accounts for 48.6% of total milk consumption;</p>	<p>Threats:</p> <p>Capacity to recruit skilled persons; Capability to sustain high quality with an increase in the number of facilities; Increase of environmental</p>
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	Poland is an emergent economy; Strong interaction with German market; Drinkable Yogurts growth rate of 18.4%.	concerns; Market highly fragmented; Possible rise of Competition.
Strengths: Strong and solid base of clients; Geographically dispersed source of revenues; Recognized ILab; Production Flexibility and quick respond to shifts in demand; Expertise in the “Hole in the Wall” concept.	Use their expertise to grow together with current partners to new markets; Explore ILab capacities to increase efficiency gains; Use Polish market as a bridge to enter in other Eastern Europe countries and in Germany; Cross sell their Products.	Recruit from current partners, with cooperation agreements to increase the number of skilled workers and at the same time increasing the Network influence; Join efforts with clients to show environmental concerns, and use the ILab to design new solutions; Apply the Hole in the Wall concept and take early advantage of an unexplored market.
Weaknesses: Lack of access to credit; High consumption of flexible packages.	Collect financial resources from abroad, using the geographical dispersion as the trigger for acceptance; Use ILab to create the adequate software to centralize purchases and increase efficiency; Innovate and create new packages solutions with ILab.	Use the strong base of clients to open the access to credit market; Create a Logoplaste’s University, capable to design similar formation procedures.

In an initial stage it is important for Logoplaste to use strategic combinations of the existing Opportunities with their Strengths and Weaknesses (S-O and W-O), and use their expertise to grow with current partners, such as Danone, and use the ILab to create new solutions. This way is possible to make use of the existing Strengths and address the existing Weaknesses before they become a real problem. At a later stage, the Implementation Plan should be supported by S-T and W-T strategies to make a Risk Assessment, mitigate those risks and develop Contingency Plans (e.g. recruit from current partners or use the strong base of clients to access the credit market).

9- Mode of Entry

Any internationalization experience must be carefully studied before implemented. Logoplaste has strong reputation and know-how in the development of internationalization strategies. Therefore it should use the same basic principles, this way several reasons for pitfalls could be overcome.

Table 12 - Mode of Entry in different Steps

Step 1: Identify growth opportunities inside Polish market. The responsible for this task is the Sales Team composed by two persons. Their knowledge about the market allows an accurate estimation of total transaction costs and the selection of overseas agents and partners.

Step 2: Creation of a vertical team, composed by persons from all divisions. This enables the company to combine several perspectives in their proposal to the Client. Trends in the market are understood and a package solution is developed. Moreover at this point Logoplaste tries to collect advices about marketing, legal, taxes and labour practices in the country.

Step 3: Delivery of the proposal. If the Client rejects the proposal then Logoplaste must try to identify new possibilities. If he shows interest then the company starts a more carefully analysis. With this analysis Logoplaste tries to see if there is any required modification of the Business Model to succeed, and develop an action plan to deliver to their potential Client.

To more effectively manage the resources allocated in the country, Logoplaste should create a subsidiary in Poland¹⁵. This strategy implies the selection of top managers¹⁶. Similarly to other projects, Logoplaste will have full ownership of the subsidiary, while establishing collaborative arrangements for a Turnkey operation. In this type of arrangement Logoplaste's client only has to turn the key to have a ready to go facility. Logoplaste is in charge to find the right suppliers and construct a factory capable to boost gains of efficiency. With this approach Logoplaste's clients have lower control over the process, however it allows them to concern solely about their core activities and leave all the risk for Logoplaste. The required investment for the operation will depend on several factors¹⁷. Those funds should be collected internationally. Due to possible financial constraints Logoplaste should entry first in the Yogurt market which implies lower initial investment. In workforce, Logoplaste will recruit native workers. In the beginning those workers will be closely monitored by experienced workers. This way the company assures that the required training is provided and their reliability and quality standards are met.

10- Implementation Plan

To succeed in the Implementation phase Logoplaste must firstly put in place the insights that arose from the TOWS Analysis. S-O and W-O combinations should be

¹⁵ If not in the beginning at least after the establishment of the second partnership by Logoplaste.

¹⁶ Either Portuguese or Polish, with knowledge about the country practices

¹⁷ Dimension of the plant, number of facilities, and number of machines, among others.

implemented to maximise success probabilities. To implement the Hole-in-the-Wall model is better to first approach companies operating in the Yogurt and Sour Milk Drinks, especially Multinational companies. These companies offer the possibility of lower initial investments, and increasing its knowledge about the market e.g. Danone¹⁸.

In a second phase, as the presence in Yogurt and Sour Milk Drinks increases, then Logoplaste should start to either enter the Drinking Milk market or try to expand to surrounding countries¹⁹, entering in other markets with profit potential. This way it is able to overcome the existing threats in the sector, such as the high fragmentation and the lack of skilled workers. At the same time Logoplaste should try to diversify sources of credit to create stronger basis to sustain an aggressive expansion. However this cannot jeopardize the 100% clients' retention rate, so this expansion can only happen if all incentives and drivers are aligned. The ability to recruit local engineers, train them on the used techniques and the innovative culture, is also essential.

It is also necessary to create a PDCA cycle for each new factory. This iterative four-step management method allows for a continuous improvement process.

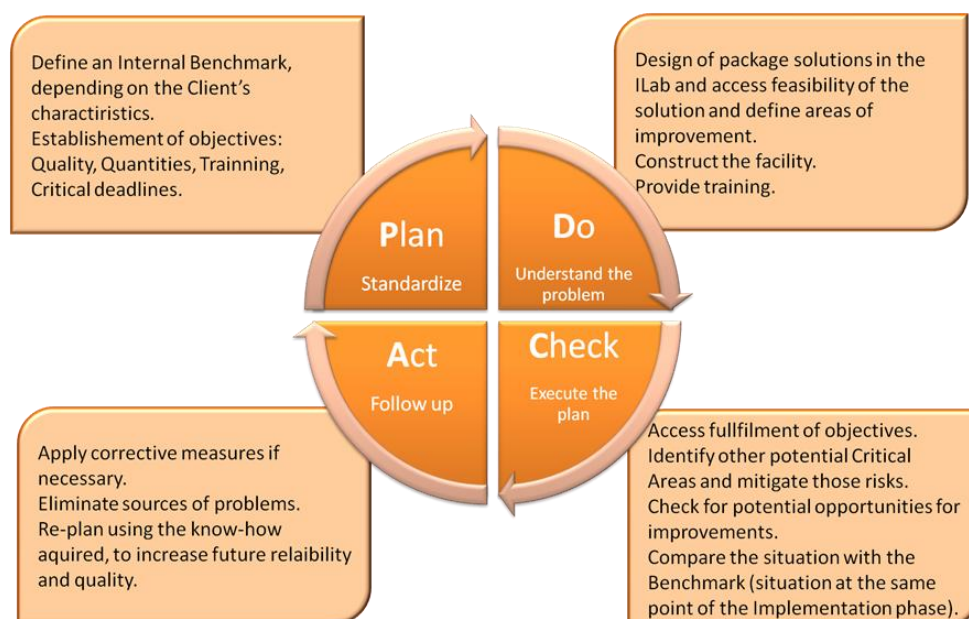


Figure 5 - PDCA Cycle for Logoplaste's Implementation Strategy

¹⁸ Who is already a Logoplaste's partner in Portugal and Brazil.

¹⁹ E.g. milk trades between Poland and Germany, Hungary, Slovakia and Slovenia have been increasing in the past years.

The PDCA should be constantly applied to check for improvements. It works also as a trigger for Contingency Plans. Moreover if first contacts with potential clients fail then Logoplaste should try a different strategy tailored to Polish's habits. Logoplaste can also recruit to Sales Teams people who already worked for their potential clients or competitors, expanding their network and ability to influence decision makers, which is one of the CSF. In case of failure then Logoplaste should consider other geographies.

Risk Assessment

Table 13 – Risk Assessment Plan.

Main Risk	Origin of the Risk	Level of Risk	Impact and Reaction	KPI
Companies with Yogurt sector do not accept any offer	Internal and External	Medium	Recast the Enter Strategy, bet on Drinking Milk category	Has Logoplaste been able to close one deal by the end of July?
Lack of skilled workers	External	High	Necessity to hire people from other geographies, which is more expensive.	Are Polish candidates able to operate a similar Logoplaste machine in another country without any training?
Lack of Credit	External	Medium	It can jeopardize the project and abort the entry, thus different type of collaborative arrangements should be made.	Is Logoplaste able to collect credit from International Institutions? Are the resources collected enough to sustain demanding quality standards?
Failure to Deliver an Innovative Product	Internal	Low	Hurtful to Logoplaste reputation in other Geographies	Are the new Package solutions meeting all the quality standards required by Polish authorities?
Failure in the Hole-in-the-Wall concept	Internal	Low	It can destroy the entry in the rest of the country, so it should be studied with the Customer	Was there any breakdown in the Customer production caused by lack of ready packages?

This Risk Assessment analysis is extremely important for Logoplaste as it allows the development of contingency plans prior to any problem in an attempt to mitigate the probability of failure. However this analysis must be dynamic, with at least a meeting per month with the client to study changes in risk, as well as to address new problems²⁰.

²⁰ See Table - KPIs for the Implementation Phase, from Booklet II

Conclusions and Recommendations

The study conducted leads to an obvious principal recommendation. Logoplaste should emphasize its bet on developing countries. This leads to a Strategic decision: which geography/country should be chosen? Within European countries, Poland is nowadays the country presenting the best combination of market potential and risk and this decision can leverage future investments in surrounding countries. Furthermore, within the Dairy Industry, in which Logoplaste has already know-how, the entrance in the Yogurts Market is a Tactical decision that allows access to an important market, and the possibility to work with Blue Chip Companies with presence in more than one market, while requesting a lower initial investment than in other categories.

The Yogurts market in Poland is not yet mature and Logoplaste can use the expected two digit growth rate to potentiate their own grow. Logoplaste should target solely top companies in the industry, to mitigate the risk of bankruptcy of its clients and to avoid seeing the chosen partner being bought by a larger company with different opinions on suppliers. Those companies are: Danone, Zott Polska, Bakoma, SM Mlekpól and Bacha (Lactalis). If this tactic fails to be implemented then Logoplaste must change its tactic and immediately start to contact companies in the Drinking Milk category.

To support the growth stated in the Vision of Logoplaste, and because the lack of skilled workers is a threat, it is necessary to create strong foundations along with Universities to reach top engineers. A Logoplaste's University could be created to allow a faster integration of Human Resources, and assure that all the standards of quality and reliability will be sustained and also insure that the predicted growth will not be unachieved due to lack of skilled workers for the factories.

Logoplaste has over 30 years of experience in the industry, which translates in a strong know-how and network, two CSF. The developed network might allow an easier entry

in groups present in Poland and already supplied by Logoplaste in other markets. It is important to move fast to take advantage of the first mover advantage to avoid a fierce competition in each client, predicted by the 5 forces analysis. It is however necessary to keep track of competitors' moves, to be able to consider changes in the followed strategy or tactics. A long term Strategy for Logoplaste should be to keep the investment on the ILab, there is still an enormous space for new discoveries in the plastic industry. Only with a significant investment Logoplaste will be able to sustain a top position in the industry. Moreover it will also allow increase network capabilities, to reinforce reputation and revenues.

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